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Box 2
Item 2-135

Nevada Landscape Approach
Nevada State Office
Reno, Nevada
December 2-3, 2010

Agenda

December 2

8:00	**Welcome Introductions**	Joe Tague
8:15	**Nevada's Landscape Approach**	Amy Lueders
	• Importance and Priority	
8:30	**Overview of National Landscape Approach**	Kit Muller
9:15	**Ecoregional Activities - How the Pieces Fit Together**	
	• Introduction to Nevada's Landscape Approach	Joe Tague
	• Rapid Ecoregional Assessments	Joe Tague
	• Districts Landscape Projects	Gene Seidlitz
	• Data Management	Brooks Wilson
10:00	**Break**	
10:15	• Landscape Conservation Cooperatives	Mike Pellant
10:30	**Stepping Down Ecoregional Assessments to Implementation**	
	• National Thoughts	Kit Muller
	• National Strike Team Meeting Results	Linda Kelly
	• Overview of the Northern Great Basin Assessment	Mike Pellant
11:15	• Northern Great Basin Assessment Refinements	Don Major
11:45	• Step Down Process	Joe Tague
Noon	**Lunch - On Own**	
1:15	**Ecoregional Direction Using Northern Great Basin Ecoregional Assessment**	Joe Tague
	• Ecoregional Goals and Objectives	
1:30	• Strategies to Meet Goals and Objectives	Group Exercise
2:00	• Group Report Out	Group Reps
2:15	**Guidance needed to Implement Strategies**	Group Exercise
	• Planning Guidance	
	• Identification of Priority Conservation Areas	
	• Identification of Priority Restoration Areas	
	• Other Management direction needs	
	• Implementation	
	• Science Needs and Data Gaps	
	• Sub-Assessments Needed	
	• Monitoring, Inventory, Data Management	
2:45	**Break**	
3:00	• Group Report Out	Group Reps
3:15	**Nevada's Landscape Approach - Beyond the Boundaries**	Joe Tague
	• Work Planning Timeline (Program of Work)	
	• Budget Integration	Sandy Gregory
	• NEPA - EA or EIS	Brian/Marguerite
	• ESA	Sandra Brewer
	• Section 106	Tom Burke
4:30	**Recap of Days Accomplishments**	Kim Dow
5:00	**Adjourn**	

Nevada Landscape Approach

December 3		
8:00	**Nevada's Landscape Level Projects**	Joe Districts
9:00	**Procurement Instruments In Place & New Opportunities**	
	• Agreements In Place	Susan Kaller
	• Nevada Partners for Conservation & Development	Joe Tague
	• Great Basin Institute	Jerry Keir
	• NRCS - EQIP	Gary Roader
9:45	**Break**	
10:00	**Procurement Instruments Needed in FY 11-12**	Joe Tague
	• Development of Priority Procurement Instruments	Group Exercise
10:45	• Group Report Out	Group Reps
11:00	**Next Steps & Action Plan**	Joe Tague
Noon	**Adjourn**	

Beyond the Boundaries

Nevada's Landscape Approach

What has happened

Nevada has experienced unprecedented landscape level change to ecological values over the past decade due the combined effects of large wildfires, expansion of invasive annual grasses, and increased demands for human use of public lands. These effects have been compounded by prolonged droughts and other variations from the normal climatic conditions.

The Great Basin states in BLM established the Great Basin Restoration Initiative (GBRI) in 1999 following a devastating fire season when about 1.7 million acres burned in about a one week period. The GBRI provides technical assistance and guidance for conducting restoration activities in a concerted, coordinated effort that relies heavily on local partnerships to prevent the Great Basin from reaching a point of no return where the slide toward ecological disaster cannot be reversed.

While BLM Nevada had been addressing these changes over time within individual administrative units and programs, it is now using an integrated landscape level approach to strategically focus treatments to conserve and restore the ecological values in priority areas.

Why a landscape approach

Nevada BLM recognized that the public lands are facing increasingly complex and widespread environmental challenges that transcend traditional management and administrative boundaries. To address these challenges, a broader landscape approach helps us focus and integrate local management actions so we can manage more effectively and use our limited resources more efficiently.

How is the landscape approach different

Traditionally, Nevada has focused on accomplishing projects to address the needs of an ecological component based on program or functional direction and priority. This was accomplished primarily with agency funds by individual Field Offices.

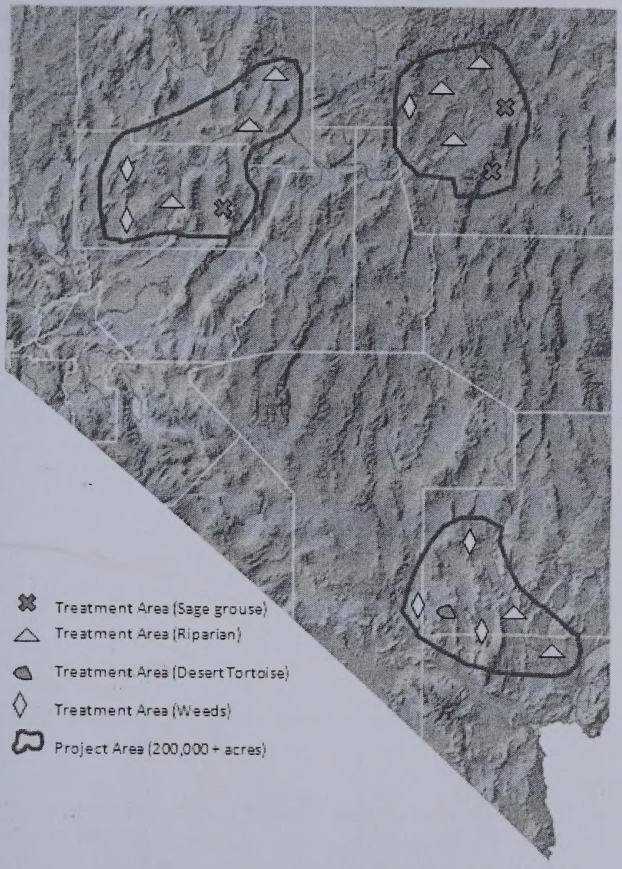
Today we have a landscape focus where we address all the ecological components through direction and priorities integrated across programs and function. It is accomplished with partners and across jurisdictional boundaries with landscape level projects.

How is the landscape approach accomplished in Nevada

Nevada's efforts build on the Bureau's landscape approach for managing Public Lands. Nevada's approach is to integrate multidisciplinary treatments into a large scale project with a consistent theme.

The State Leadership Team agreed that each District would plan one landscape level project while implementing a separate landscape level project on an ongoing basis. Landscape level projects would be multiple treatments over 3-5 years within an area greater than 200,000 acres (Figure 1).

Figure 1. Conceptual drawing of Project Areas with treatments. Project Areas are 200,000 acres or more; treatments vary in size and type and are unique to each project area.



The Program Leads in the State Office coordinate, evaluate, and prioritize the treatment proposals within the landscape projects. Then they combine program funds to accomplish the priority treatments.

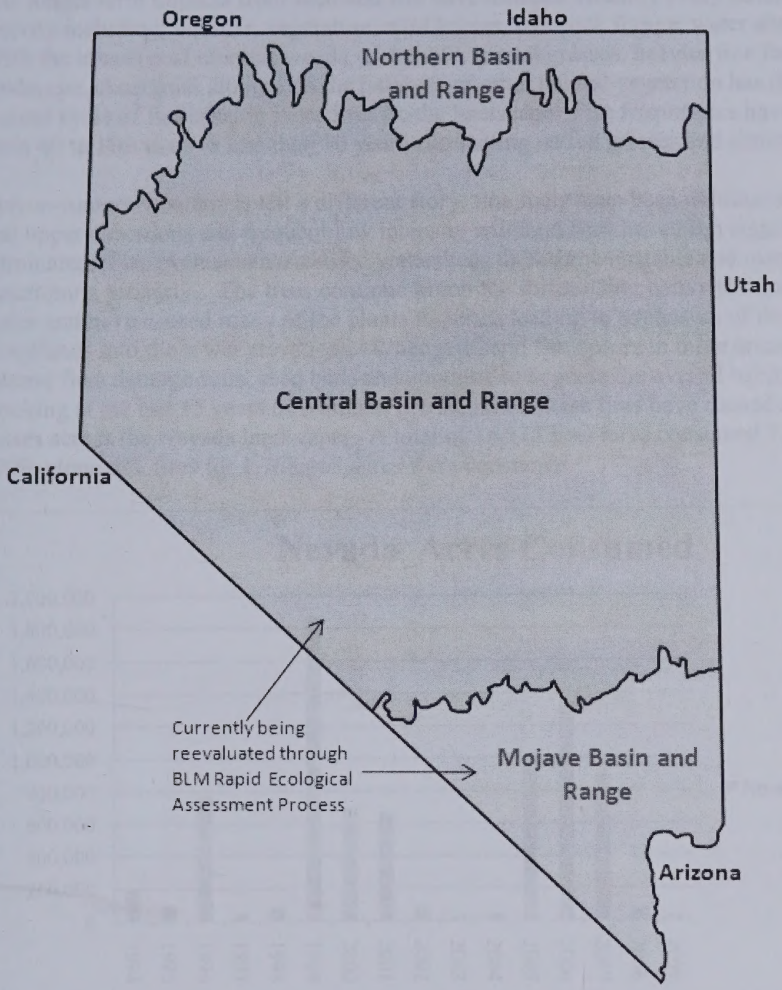
What are the Conservation Elements (Ecological Values)

Nevada has a unique array of ecological values from wide ranging species such as sage grouse and desert tortoise to small isolated populations of plant and animal species tied to specific springs or soil types. In this landscape approach, BLM Nevada focuses on specific species of concern and the terrestrial and aquatic ecological values of ecoregional significance. These values vary by ecoregion across the state.

There are three ecoregions in Nevada (Fig. 2). These are the Northern Basin and Range, along the Oregon and Idaho border; the Mojave Basin and Range in the southern end of the state that borders California, Arizona, and Utah; and the Central Basin and Range between the other two. All these areas have been addressed in a regional assessment. The Central and Mojave Basin and Range Ecoregions are currently being reevaluated through the BLM Rapid Ecoregional Assessment process. The new assessments will provide information to help prioritize where landscape level projects will be implemented. These new assessments will lead to specific ecoregional direction to help guide future conservation and restoration actions.

The conservation elements identified in the Northern Basin and Range were native sage-steppe and salt desert shrub plant communities with the sage-grouse and mule deer as species of concern. The Mojave Basin and Range conservation element is the conservation and restoration of native Mojave plant communities with the desert tortoise the specie of concern. In the Central Basin and Range, the conservation elements were the native sagebrush plant communities with the sage grouse the species of concern. These conservation elements are updated and refined as the ecoregional assessments are completed.

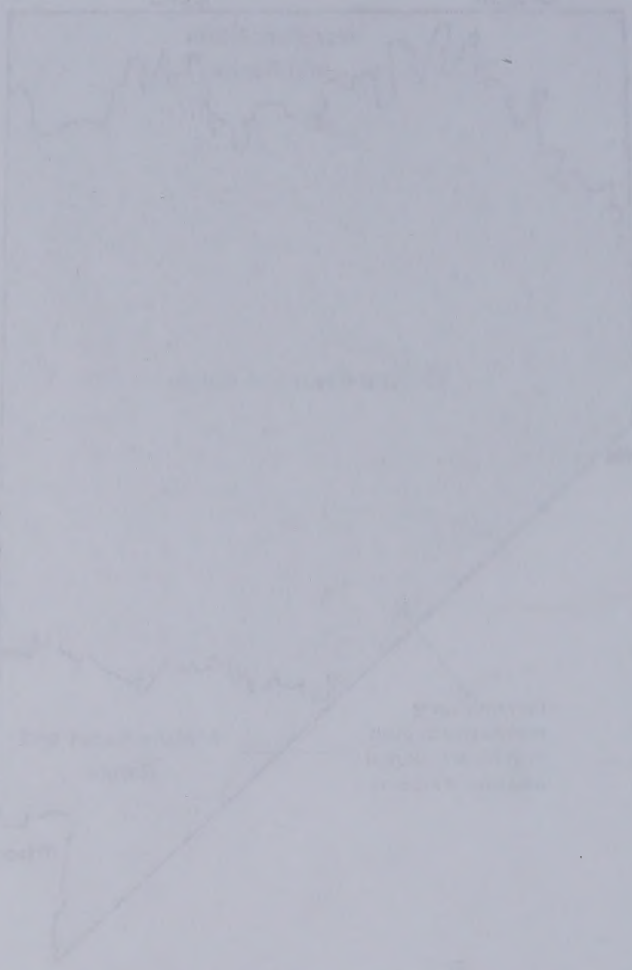
Figure 2. Nevada's Ecoregions



What are the agents changing the landscape

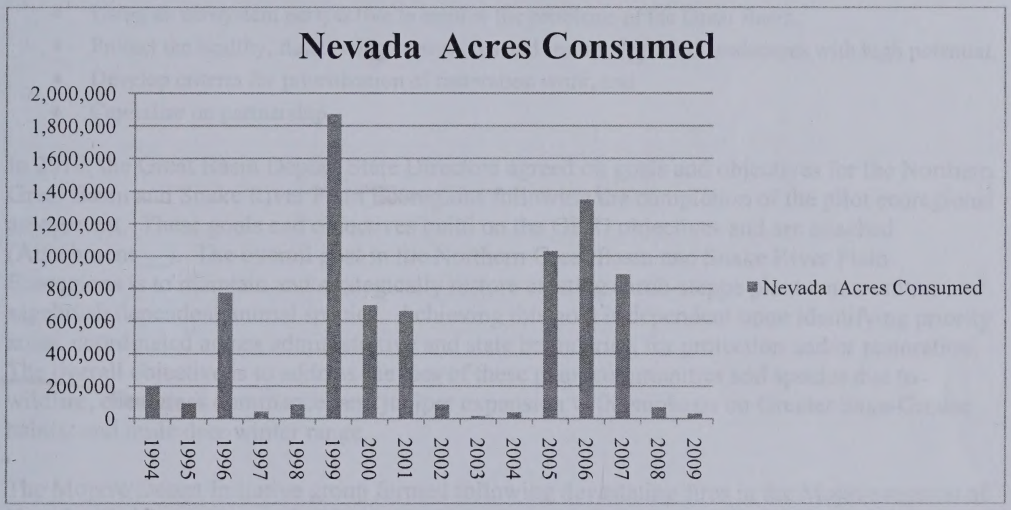
Wildfire

The Great Basin is changing more rapidly now than in any other time in the last 150 years, and wildland fire has been one of the major factors of change. Depending upon how and where wildfire occurs is a major concern for wildland fire fighters and land managers. This means fire fighters are seeing fire behavior that is more unpredictable, more erratic, which is more dangerous to both the fire fighter and the public. The social and economic impacts affect the public in both the short term and long term.



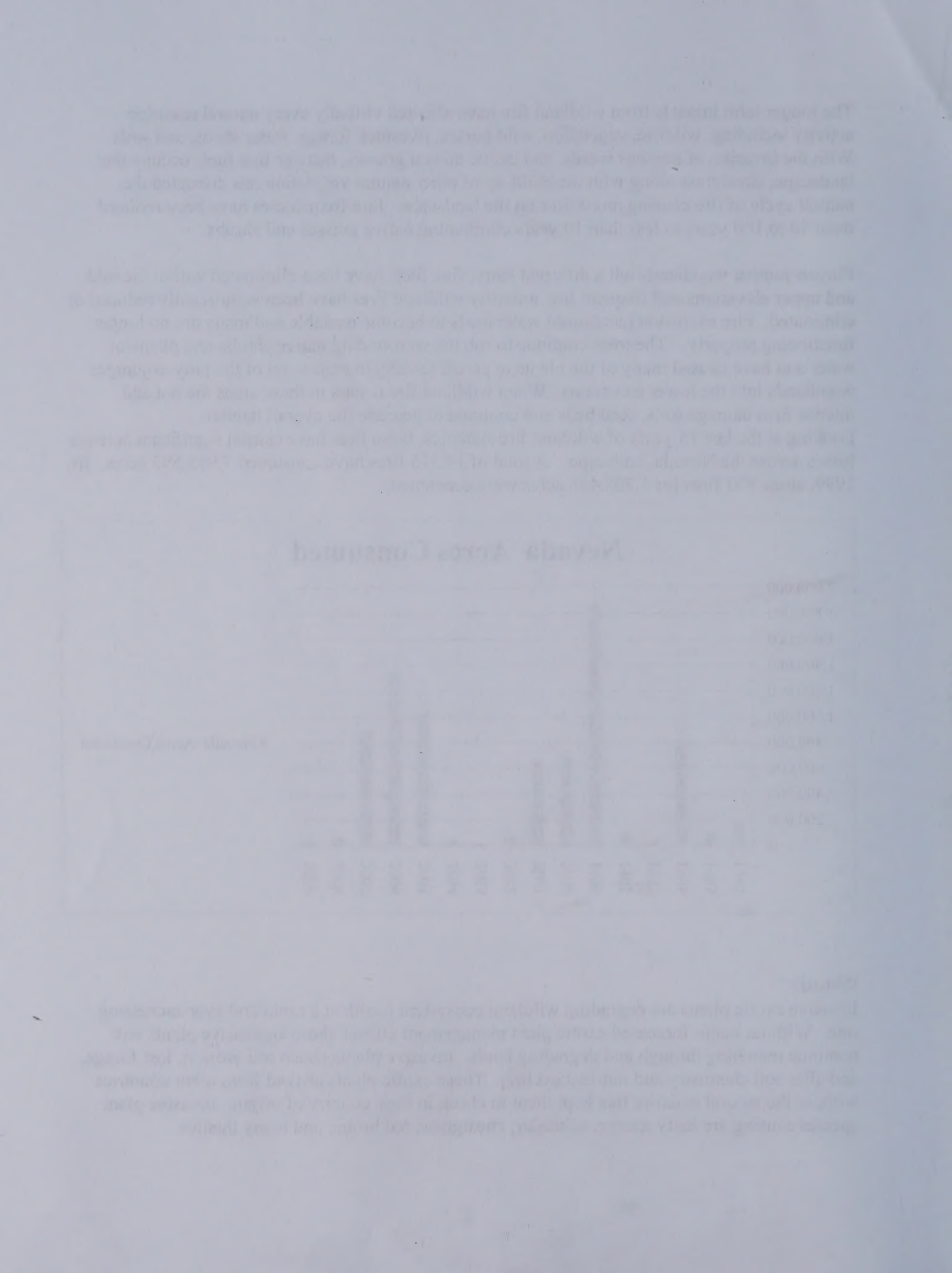
The longer term impacts from wildland fire have affected virtually every natural resource activity including: wildlife, vegetation, wild horses, livestock forage, water sheds, and soils. With the invasion of noxious weeds, and exotic annual grasses, heavier fine fuels occupy the landscape, cheatgrass along with the build-up of other natural vegetation has disrupted the natural cycle of fire causing more fires on the landscape. Fire frequencies have been reduced from 40 to 100 years to less than 10 years eliminating native grasses and shrubs.

Pinyon-juniper woodlands tell a different story, fine fuels have been eliminated within the mid and upper elevations and frequent low intensity wildland fires have been significantly reduced or eliminated. Fire exclusion has caused watersheds to become unstable and many are no longer functioning properly. The trees continue to rob the surrounding native shrubs and plants of water and have caused many of the plants to perish leading to expansion of the pinyon-juniper woodlands into the lower elevations. When wildland fire occurs in these areas the hot and intense fires damage soils, seed beds and continue to degrade the overall habitat.
Looking at the last 15 years of wildland fire statistics, these fires have caused significant acreage losses across the Nevada landscape. A total of 14,575 fires have consumed 7,965,593 acres. In 1999, alone 833 fires for 1,768,468 acres were consumed.



Weeds

Invasive exotic plants are degrading wildland ecosystem health at a rapid and ever-increasing rate. Without major increased exotic plant management efforts, these aggressive plants will continue marching through and degrading lands. Invasive plants cause soil erosion, lost forage, and alter soil chemistry and nutrient cycling. These exotic plants arrived from other countries without the natural enemies that kept them in check in their country of origin. Invasive plant species causing are leafy spurge, saltcedar, cheatgrass, red brome and many thistles.



Climate Change

Climate change is defined as the change in the distribution of weather over a period of time. Recent uses of the term generally refer to changes in present-day climate and are typically associated with anthropogenic impacts. Stress associated with climate change include increasing temperatures and decreasing precipitation resulting in landscape changes such as altering snowmelt regimes, changes in habitat distributions, vegetation transformations, increases in wildfire and invasive species. BLM lands could be more susceptible to these changes as impacts from climate change act synergistically with current land uses.

Land Uses (Development) - need broad perspective to assess effects with placement on the landscape to make informed decisions - Brian?

What are the goals and objectives

The Great Basin Restoration Initiative (GBRI) was initiated in 2000 following one of the worst wildfire years known in the Great Basin. The primary goal of GBRI is the restoration of the Great Basin. The GBRI goals and objectives guided the restoration work associated with the Healthy Lands Initiative for the Tri-State Emphasis Area starting in 2007. Objectives[1] for this restoration included:

- Using an ecosystem perspective to resolve the problems of the Great Basin,
- Protect the healthy, functioning ecosystems and restore degraded landscapes with high potential,
- Develop criteria for prioritization of restoration work, and
- Capitalize on partnership.

In 2010, the Great Basin Deputy State Directors agreed on goals and objectives for the Northern Great Basin and Snake River Plain Ecoregions following the completion of the pilot ecoregional assessment. These goals and objectives build on the GBRI objectives and are attached (Attachment __). The overall goal in the Northern Great Basin and Snake River Plain Ecoregions is to maintain and strategically restore existing shrub-steppe plant communities and sagebrush-dependent animal species. Achieving this goal is dependent upon identifying priority areas, coordinated across administrative and state boundaries, for protection and/or restoration. The overall objective is to address the loss of these plant communities and species due to wildfire, cheatgrass dominance, and juniper expansion with emphasis on Greater Sage-Grouse habitat and mule deer winter range.

The Mojave Desert Initiative group formed following devastating fires in the Mojave regions of Nevada, Utah, and Arizona in 2005 and 2006. The overall goals is to protect existing native Mojave plant communities from wildfire and conversion to annual invasive grasses, and to strategically restore native vegetation to burned areas with high potential for success.

What needs to be done

Cheatgrass - 500,000 acres per year treatments needed
PJ (Toushe) - 200,000 acres per year treatments needed
Loss of sage grouse habitat

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[1] The Great Basin: Healing the Land, April, 2000, pg 7-8, http://www.blm.gov/id/st/en/prog/gbri/information.html

Loss of mule deer winter range
loss of tortoise habitat

What has been done

Accomplishments

Nevada has taken accomplish a significant amount of treatments to address what needs to be done. While it started by program specific actions, it has evolved to the current integrated approach.

Hazardous Fuels Management Accomplishments for Nevada

Nevada's Hazardous Fuels Management program's inception began after the 1999 fire season. The hazardous fuels program began in earnest with the passing of the Healthy Forest Restoration Act which provides funding to treat areas where fire has been excluded resulting in degraded vegetation and dangerously flashy fuels levels in the wildland areas (Non-WUI) and near the identified communities at risk (WUI). Money from this program allows land managers to use mechanical methods, prescribed fire, and chemical methods to stimulate new grow, remove unhealthy or invasive vegetation, recycle important soil nutrients, and create fuel breaks to isolate or protect communities at risk and protect critical native plant communities from cheatgrass invasion.

Since that time over 237,000 acres of mechanical, prescribed, and chemical treatments have been completed. The table below describes the accomplishment by treatment type.

Hazardous Fuels Management Treatments outside the Wildland Urban Interface

Year	Prescribed Fire Acres	Mechanical Treatments	Chemical Treatments	Total
2002*				32,158
2003	1,041	34,877	18	35,936
2004	3,126	14,620	14	17,760
2005	5,036	8,187	14	13,237
2006	2,130	9,467	0	11,597
2007	2,241	6,530	2,882	11,653
2008	1,700	15,425	900	18,025
2009	5,187	6,166	1,596	12,949
Total	**20,461**	**95,272**	**5,424**	**153,315**

*Treatment Type not available

Hazardous Fuels Management Treatments within the Wildland Urban Interface

Year	Prescribed Fire Acres	Mechanical Treatments	Chemical Treatments	Total
2002*				0
2003	7,626	145	3,128	10,899
2004	545	9,054	1,221	10,820
2005	5,335	8,051	1,371	14,757
2006	221	5,077	2,092	7,390
2007	1,302	6,313	10,385	18,000
2008	61	7,594	1,339	8,994
2009	1,203	10,729	1,360	13,292
Total	16,293	46,963	20,896	84,152

* WUI was established in 2003

Weeds

The management of invasive plants includes the surveys to find infestations, treatments and evaluations of those treatments. Comprehensive invasive plant surveys were initiated across BLM Nevada starting in 1998 and many areas have received follow up surveys. Since 2000, over 39 million acres have been surveyed for invasive plants, with an average annual amount of 4.3 million acres. Weed treatments are conducted by various methods, including herbicides, biological control, and physical removal. As these invasive plants are often difficult to control, treatments must occur over multiple years to completely remove all plant parts and any seed left in the soil. From 2000-2008, BLM Nevada conducted over 140,000 acres, averaging 15,000 acres per year. The majority of the treatments have been herbicide applications, followed by manual and mechanical removal and biological control.

Sage Grouse - Sage Obligates

Habitat loss is the single strongest driver contributing to sage grouse and other sagebrush obligate species declines. Habitat loss can be direct, through wildlife and development, or indirect through increased fragmentation, competition from invasive or exotic vegetation, or a combination of these change agents. Protection, enhancement and restoration of sagebrush habitat are essential activities when change agents drive the creation or further undesired future conditions. The application of shrub and grass treatments can be pro- and re-active responses to stem the tide of loss of the sagebrush sea. Between 2000-2009, Nevada BLM Districts had a median average of 30,000 acres of shrub and grass treatments with a total of nearly 435,000 acres of shrub and grass treatments (Fig T). The cyclic nature of applications reflects the beginning use of an integrated, adaptive management (AM) process in 2000 (Fig U). The spikes in 2002 and 2006 are reflective of the implementation phase of the AM cycle. In 2000, only two Districts were applying treatments, two years later, all 6 Districts were actively engaged in shrub and grass treatments. In 2000, the Districts were using a single subactivity to complete work on the 980 acres. By 2001, six different subactivities were being used to complete work. Currently,

the Districts are using funding from 12 different functional areas to complete sagebrush restoration work.

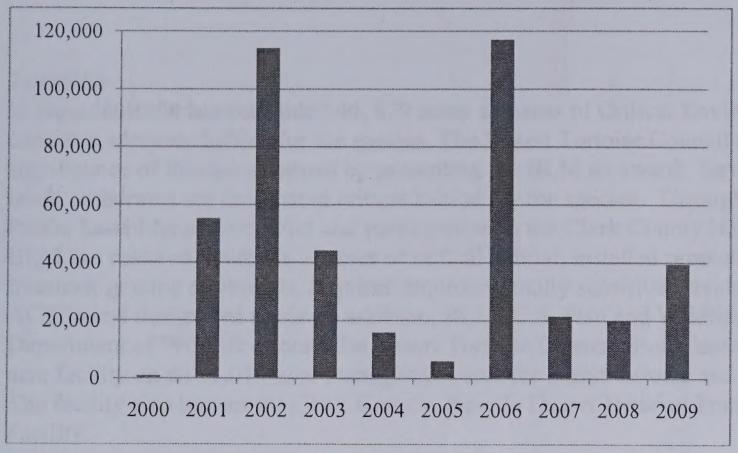


Fig T. Acres of shrub and grass treatments from 2000-2009.

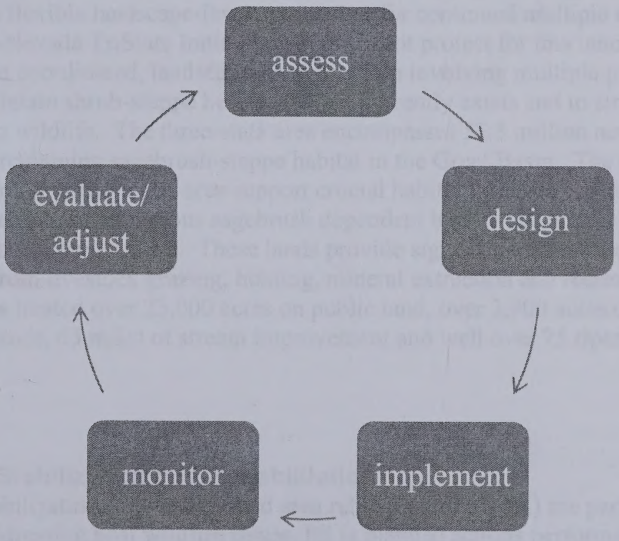


Fig U. Adaptive Management Process.

Tortoise

In Nevada, BLM has set aside 946, 879 acres as Areas of Critical Environmental Concern to conserve adequate habitat for the species. The Desert Tortoise Council recognized the significance of this achievement by presenting the BLM an award. Seventy percent of the public lands withdrawn are designated critical habitat for the species. Through the Southern Nevada Public Land Management Act and participation in the Clark County Habitat Conservation Plan, BLM has restored hundreds of acres of critical habitat, installed protective fencing, closed livestock grazing allotments, acquired environmentally sensitive private lands within these ACECs and designated roads. In addition, BLM, U.S. Fish and Wildlife Service and Nevada Department of Wildlife operate the Desert Tortoise Conservation Center in Las Vegas, a 222-acre facility on an 11,014-acre management area for desert tortoise and Mojave Desert research. The facility also houses the Clark County, Nevada Desert Tortoise Translocation and Holding Facility.

HLI & HL

Healthy lands represents a new concept for meeting emerging challenges in managing natural resources with flexible landscape-level approaches for continued multiple use. In 2007, the Oregon-Idaho-Nevada TriState Initiative was one pilot project for this innovative approach. This Partnership is a coordinated, landscape-level program involving multiple partners working together to maintain shrub-steppe health where it currently exists and to strategically restore areas critical to wildlife. The three-state area encompasses 53.5 million acres, roughly 50 percent of the remaining sagebrush-steppe habitat in the Great Basin. The diversity and integrity of the plant communities in this area support crucial habitat for large populations of sage-grouse, mule deer, antelope and numerous sagebrush dependent birds. The area is also important to the livelihood of local communities. These lands provide significant economic benefits to local communities from livestock grazing, hunting, mineral extraction and recreation. To date, the Partnership has treated over 23,000 acres on public land, over 3,900 acres on non-BLM administered lands, 65 miles of stream improvement and well over 75 riparian improvement projects.

Emergency Stabilization and Rehabilitation

Emergency stabilization (ES) and burned area rehabilitation (BAR) are part of a holistic approach to addressing post wildfire issues. ES is planned actions performed by burned area emergency response (BAER) teams within one year of wildfire containment to stabilize and prevent unacceptable degradation to natural and cultural resources, to minimize threats to life or property resulting from the effects of a fire, or to repair/replace/construct physical improvements necessary to prevent degradation of land or resources. BAR is efforts undertaken within three years of wildfire containment to repair or improve fire-damaged lands unlikely to recover

naturally to management approved conditions, or to repair or replace minor facilities damaged by fire. Between 2000 and 2010, Nevada ES&R teams have authored and signed over 300 ES&R plans. The major accomplishments from those plans include: 2.5 million acres of weed inventories; 26,000 acres of weed treatments; 1.7 million acres of applied fire rehabilitation treatments (such as aerial/ground seeding and tree/brush planting); 480,000 acres of burned area stabilization (such as soil erosion controls and aerial/ground seeding); and monitoring 11.5 million acres of ES&R treatments.

Riparian

Riparian areas are the jewels of desert ecosystems. They are typically the only perennial water in most watersheds and offer vast biological diversity. Riparian areas are important havens for local wildlife, many of which are listed as threatened or endangered species by the USFWS. The driest state in the nation, Nevada's water resources are scarce and precious. Most of Nevada is encompassed within the Great Basin and Mojave Deserts, which are high deserts receiving less than 11 inches of average yearly precipitation. Increasing demand and development of public lands has put strain on water resources within Nevada; jeopardizing the health of the riparian areas they support. Between 2001 and 2010, Nevada BLM Districts have inventoried and monitored over 1,800 miles of stream riparian habitats and 7,600 acres of spring-wetland habitats. Treatments, including riparian fencing, invasive weed removal, bank stabilization and water developments, have been constructed and maintained for over 3,400 projects. Additionally, the Nevada BLM is a member of the Nevada Riparian Service Team, which is comprised of Federal, State and local stakeholders interested in cooperative riparian restoration and management. This team provides training and support to help stakeholders identify adaptive management strategies that can improve riparian health.

WH&B Gathers

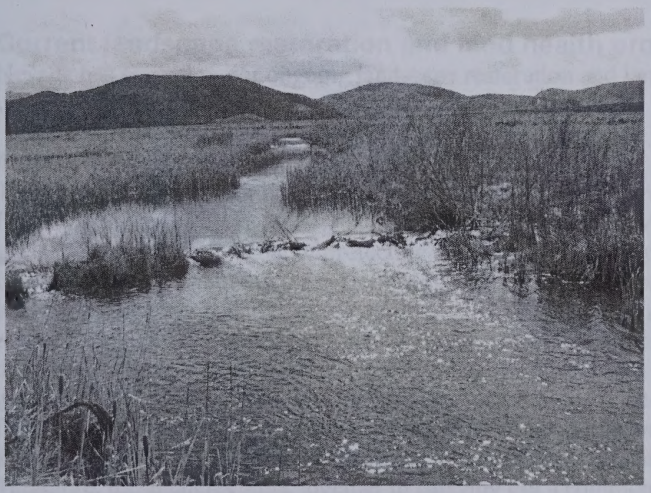
ARRA

Fisheries

Nevada is home to a unique assemblage of fish species ranging from large, cold-water trout to 1-inch long pupfish isolated in desert springs with water temperatures that exceed 90°F. As the driest state in the nation with few perennial water sources, it is not surprising that Nevada is home to 26 threatened or endangered fish and that 17 of these are endemic to Nevada. Development of water resources and the introduction of invasive aquatic species are threatening all of Nevada's fish populations. Despite these challenges, between 2000 and 2009 Nevada BLM Districts have applied treatments on over 450 miles of streams and wetlands, constructed almost 300 aquatic/riparian/wetland projects, and maintained over 2000 projects. In Southern Nevada, BLM has been working toward construction of fish barriers on several river systems. Once in place, native fish populations are protected by removing invasive species and preventing them from re-entering the system. In Northern Nevada, the BLM Nevada Elko District partnered with Newmont Mining Corporation, Elko Land and Livestock Company, and others to develop the Maggie Creek Watershed Restoration Project. The goal of this Project is to improve 82 miles of streams, 1982 acres of riparian habitat, 40,000 acres of uplands, and improve overall watershed conditions within the Maggie Creek Basin. Nevada BLM partners with several other agencies

including the Nevada Department of Wildlife and Trout Unlimited to design, construct, and monitor the results of aquatic improvement projects. Most fish habitat improvement projects also benefit other aquatic species as well as species that are dependent on the riparian habitat, such as the endangered Southwestern Willow Flycatcher.

Maggie Creek. October, 1980. Under seasonlong grazing, Maggie Creek was characterized by warm, shallow flow and a nearly complete absence of a riparian zone.



Maggie Creek (immediately downstream from photo above). May, 2007. Habitat conditions have improved dramatically as a result of the Maggie Creek Watershed Restoration Project.

Monitoring

Budget integration

Project prioritization

Nevada has specific criteria to use in the evaluation of vegetation treatment projects. These criteria have been used since 2007. Some areas have additional specific criteria developed through collaboration with other BLM States, Federal and State agencies. These criteria emphasize the landscape scale. Partnerships are also a key element in the criteria.

Nevada Criteria - Appendix Items
NGB Criteria
MDI criteria

What have we learned

- Have to work together across programs to have enough funding to make a difference
- have to work with partners
- have to focus on specific areas to treat all land health needs in a short period of time

Current landscape restoration and land health projects

Nevada has several major ongoing landscape restoration and land health partnership projects underway. These include:

Mojave Desert Initiative (MDI)

The Mojave Desert Initiative (MDI) focuses on protection and restoration of native plant habitats from wildfire in the Nevada, Arizona, and Utah portion of the Mojave Desert Ecoregion. It is a grass roots effort with a goal of protecting and restoring native plant communities with emphasis on desert tortoise habitat in the eastern Mojave. This group completed a rapid assessment of unburned native Mojave plant communities and burned areas with restoration potential. The purpose of the assessment was to identify areas to focus treatments. The group has also developed wildfire suppression guidelines used by all wild land fire agencies in the area. These guidelines provide for less restrictive initial attack in Desert tortoise habitat in an effort to keep fires small. This partnership annually prioritizes projects and work together to accomplish these. The Mojave Desert ecosystem transcends individual federal, state, and local jurisdictions. Therefore, the agencies work together in carrying out a common vision for the area. This includes BLM offices in the three states, the three state wildlife management agencies, US Fish and Wildlife Service in Nevada and Arizona, the Department of Defense, the National Park Service, and many more.

Tuscarora Sage-Steppe Restoration Partnership

For over 15 years the Elko District in close coordination and cooperation with the Nevada Department of Wildlife has worked closely together on the Tuscarora Sage-Steppe Restoration

Partnership. The emphasis has been on completing emergency stabilization and rehabilitation projects, as well as healthy lands initiative seedings to restore sage-steppe habitat lost to large wild fires over the past several years, and restoration of riparian habitats. NDOW contributed funding and labor toward noxious weed treatments on the Susie Fire which assisted with effective treatment of Scotch thistle. This partnership has expanded to include the land owner and livestock permittee Maggie Creek Ranch with weed treatments on adjacent private lands in the Susie Creek Watershed. Another partner, Nevada Muley's, are funding a two phase sagebrush seedling planting project in the Rooster's Comb and the Rock Creek Ranch area. NV Muley's committed $10,000 toward sagebrush seedlings and has been the source of most of the volunteer labor for planting seedlings. The National Wild Turkey Federation has work with Elko BLM for the past 5 years with Cottonwood tree planting along the South Fork of the Humboldt and along the Humboldt in Carlin Canyon. Elko District has also worked with other groups in rehabilitation efforts through NDOW with aerial seeding in selected wildlife habitat areas affected by wildfires. Groups such as the Mule Deer Foundation, Nevada Chukars Unlimited, Rocky Mountain Elk Foundation, Nevada Bighorns Unlimited, and Elko Bighorns Unlimited have contributed funds to NDOW which has paid for aerial application costs for rehabilitation seedings. The partnership got a big shot in the arm with over $1,000,000 in ARRA funding this year.

Montana Mountains Cooperative Fuels and Rehabilitation Management Project

The Winnemucca District's Montana Mountains Cooperative Fuels and Rehabilitation Management Project is being developed to protect important sage-grouse, sagebrush obligate, Threatened and Endangered and sensitive species habitat within the Montana Mountains. These mountains contain some of the most important intact habitat for Lahontan cutthroat trout, a threatened species and sage-grouse, a sensitive species. The goal of the plan is to reduce the risk of unwanted wildland fire and to protect and maintain healthy resilient habitats and rangeland within the Montana Mountains. Partners in this project include the Nevada Division of Wildlife, University of Nevada Reno Cooperative Extension, the US Fish and Wildlife Service, plus a number of interested publics including the N-2 grazing board and ranchers. The plan is in the initial stages of development. Approximately 15,000 acres of treatments are being proposed.

Santa Rosa Mountains Cooperative Fuels Treatment Project

The Santa Rosa Mountains Cooperative Fuels Treatment Project on the Winnemucca District is a partnership with Nevada Division of Wildlife and US Forest Service. The Santa Rosa Mountains contain some of the most important Sage-grouse, sagebrush obligate, Threatened and Endangered, and sensitive species habitat within the state of Nevada. In addition to Sage-grouse habitat, streams within the range include Lahontan Cutthroat trout, a threatened species. Vegetation and other resources along the west flank of the Santa Rosa Mountains are at substantial risk of wildfire because of continued drought; fuels build up, and close proximity to Highway 95, a source for human caused fire. The Santa Rosa project was developed to protect important wildlife habitat by limiting the potential spread of wildfire. Fuelbreaks, removing hazardous fuels would be constructed in order to protect sensitive species habitat applicable to sagebrush obligate species and Lahontan Cutthroat Trout habitat. There is also a need to protect other important wildlife habitat in the area. The fuelbreaks would also provide and protect public safety, property, infrastructure, and grazing allotments. A total of approximately 1,555 acres of fuelbreaks are to be constructed. The environmental assessment was completed in May 2010.

Phase 1 of the project has been completed totaling 715 acres of fuelbreaks. Contracts are pending for completion of phase 2. Total project is expected to be completed by 10/1/10.

3-Bars Ecosystem and Landscape Restoration Project

The Battle Mountain District is in the process of developing the 3-Bars Ecosystem and Landscape Restoration Project (3-Bars Project) that focuses on restoration at the landscape level. The 3-Bars Ecosystem in northern Eureka County, Nevada spans about 750,000 acres and includes three major mountain ranges. Many factors are contributing to the overall decline in land condition of this area, which is facing the loss of sagebrush, bitterbrush, and mountain shrub habitats that are critical for sensitive wildlife species such as sage-grouse, pygmy rabbits, and mule deer, and riparian wetlands that provide important habitat for the threatened Lahontan cutthroat trout and other aquatic species. These factors include increasing incidence and severity of wildfire, increasing expansion of downy brome (cheatgrasss), increasing expansion and densification of pinyon pine and juniper woodlands, and increasing human impacts (such as mining activities, grazing management practices, and off-highway vehicle use). This project is a comprehensive treatment program for dramatically improving the health of the 3-Bars Ecosystem and reducing the risks that are contributing to its decline. The proposed vegetation treatments would range from several acres to several thousand acres. The Nevada Department of Wildlife, National Trails System – National Park Service, and Eureka Board of County Commissioners are participating in the planning of this project. Additional partners will be identified as the project develops.

New restoration and land health projects

In addition to the current projects, the following

What is needed

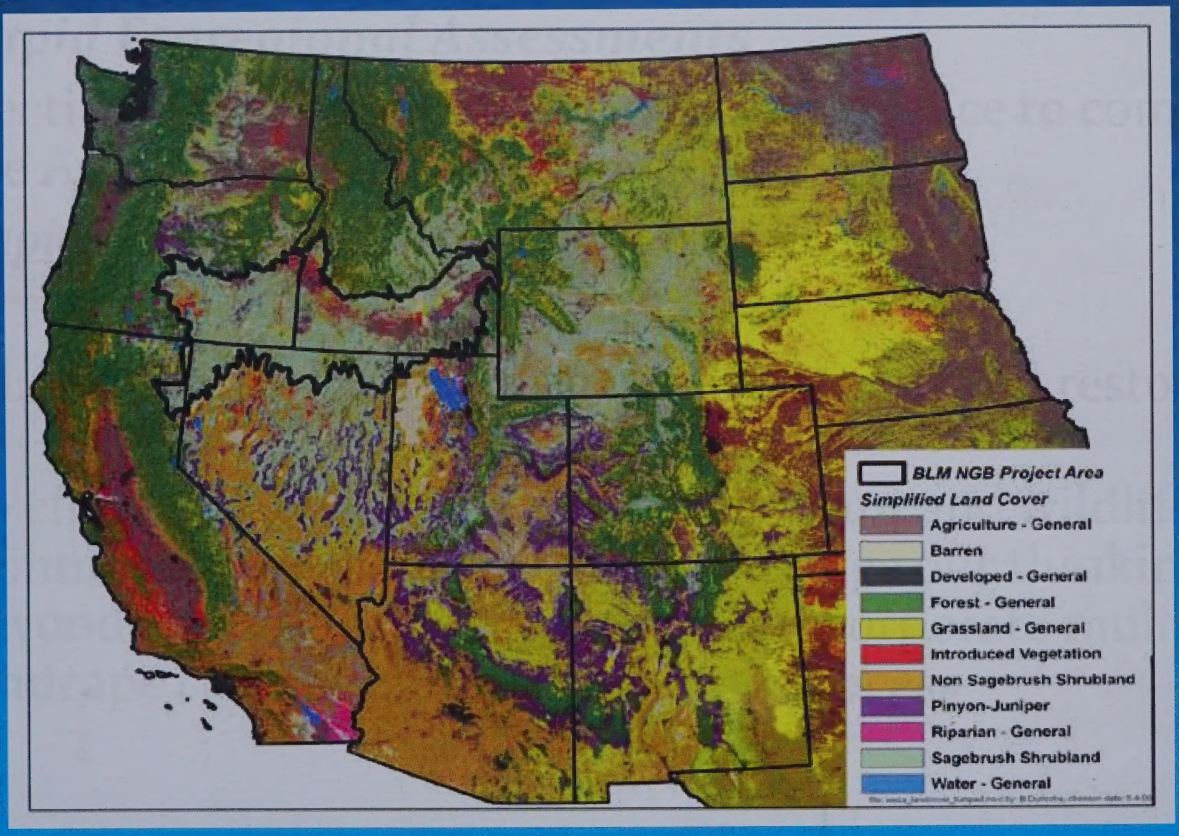
Northern Great Basin Rapid Assessment:

The path to a Stepdown Framework

Don Major

BLM - Great Basin Restoration Initiative

NGBRA Project Area



Level III Ecoregions

BLM Regional Assessments

Rapid Ecoregional Assessments

Objective: To leverage *existing* data and science to complete the Assessments in a timely manner.

Rapid means completion in a year or less

Goal: To identify focal areas for conservation and restoration.

To effectively conserve and manage plant and wildlife communities will require BLM to change our thinking beyond field office boundaries and incorporate multi-scale landcape *context* into our planning process

Purpose

- Demonstrate/document a method to conduct large (regional) scale rapid spatial assessment of potential areas of selected *Resource Value* in the context of specific *Agents of Change*

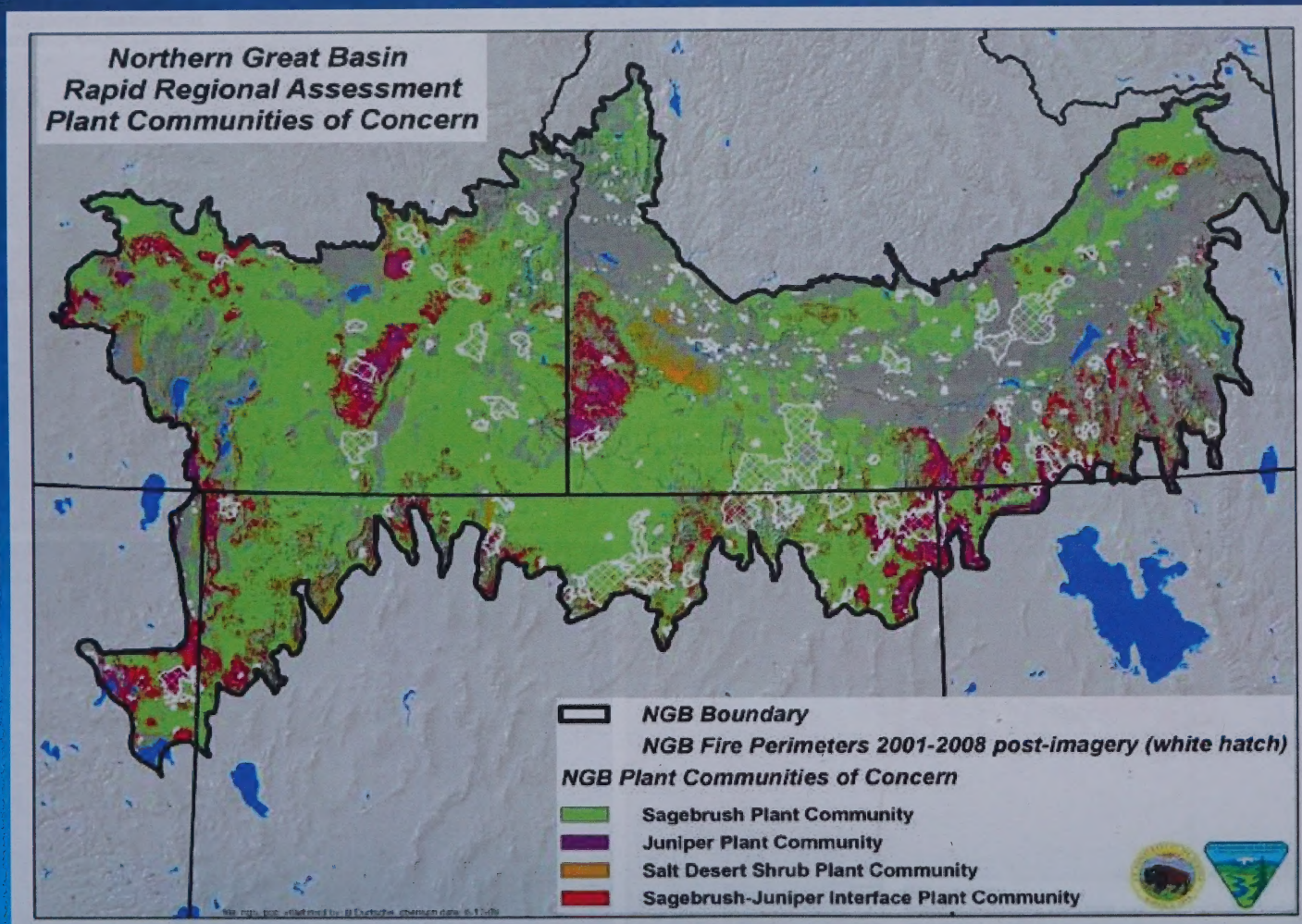
FOCUS ...

Plant Communities	Priority Species/Habitats	Priority Change Agents
Sagebrush	*Sage grouse COH*	*Cheatgrass Risk*
Juniper	*Mule Deer*	*Large Fire Risk*
S/J Interface		
Salt Desert Shrub		

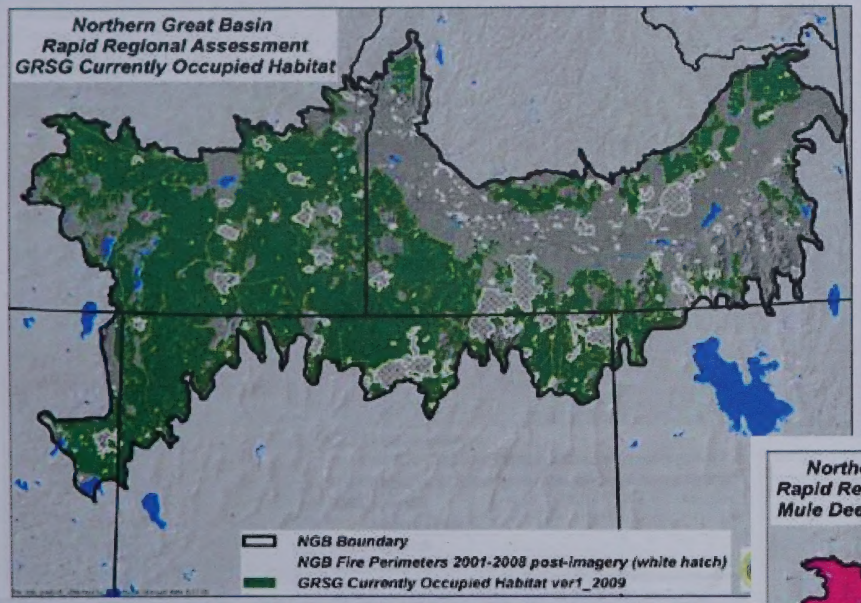
Purpose

Resource Values

Plant Communities of Concern

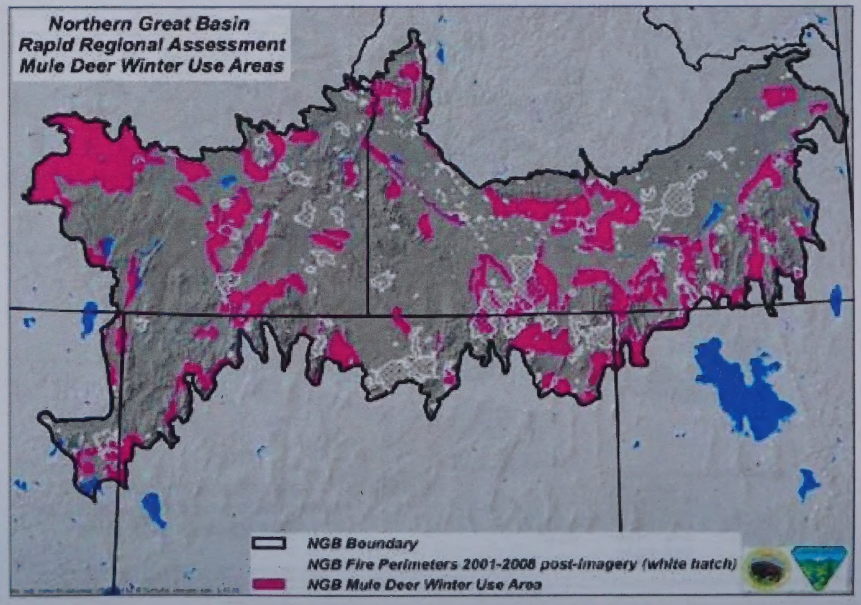


Resource Values


Northern Great Basin
Rapid Regional Assessment
GRSG Currently Occupied Habitat
NGB Boundary
NGB Fire Perimeters 2001-2008 post-imagery (white hatch)
GRSG Currently Occupied Habitat ver1_2009

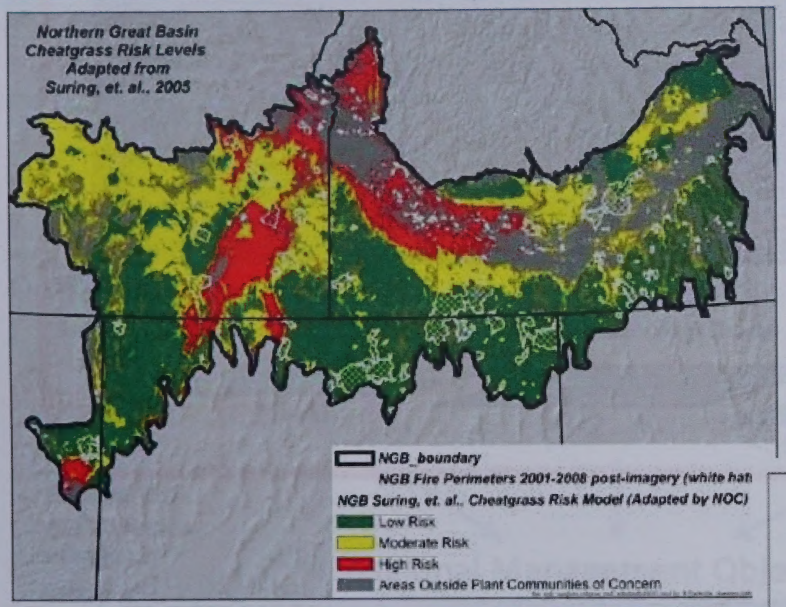
Sage grouse COH

Mule Deer Winter Use

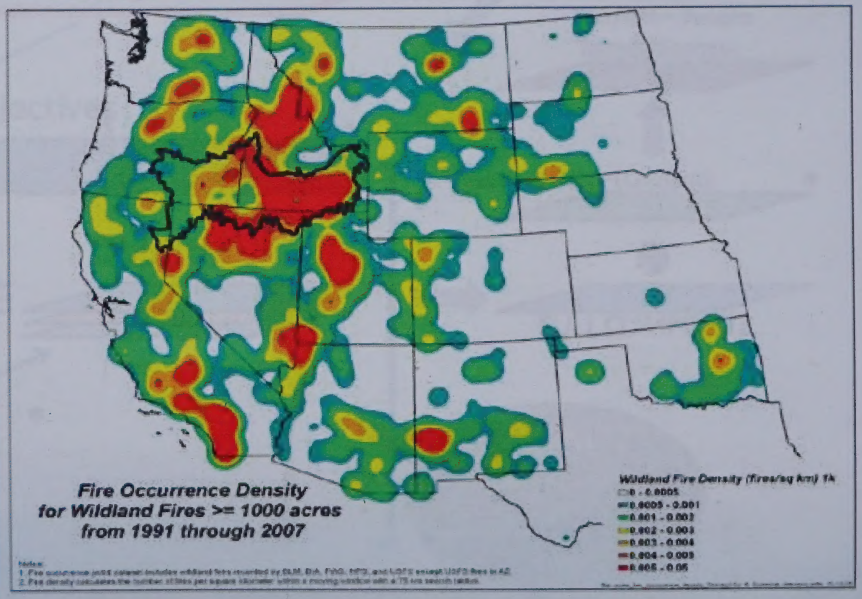

Northern Great Basin
Rapid Regional Assessment
Mule Deer Winter Use Areas
NGB Boundary
NGB Fire Perimeters 2001-2008 post-imagery (white hatch)
NGB Mule Deer Winter Use Area

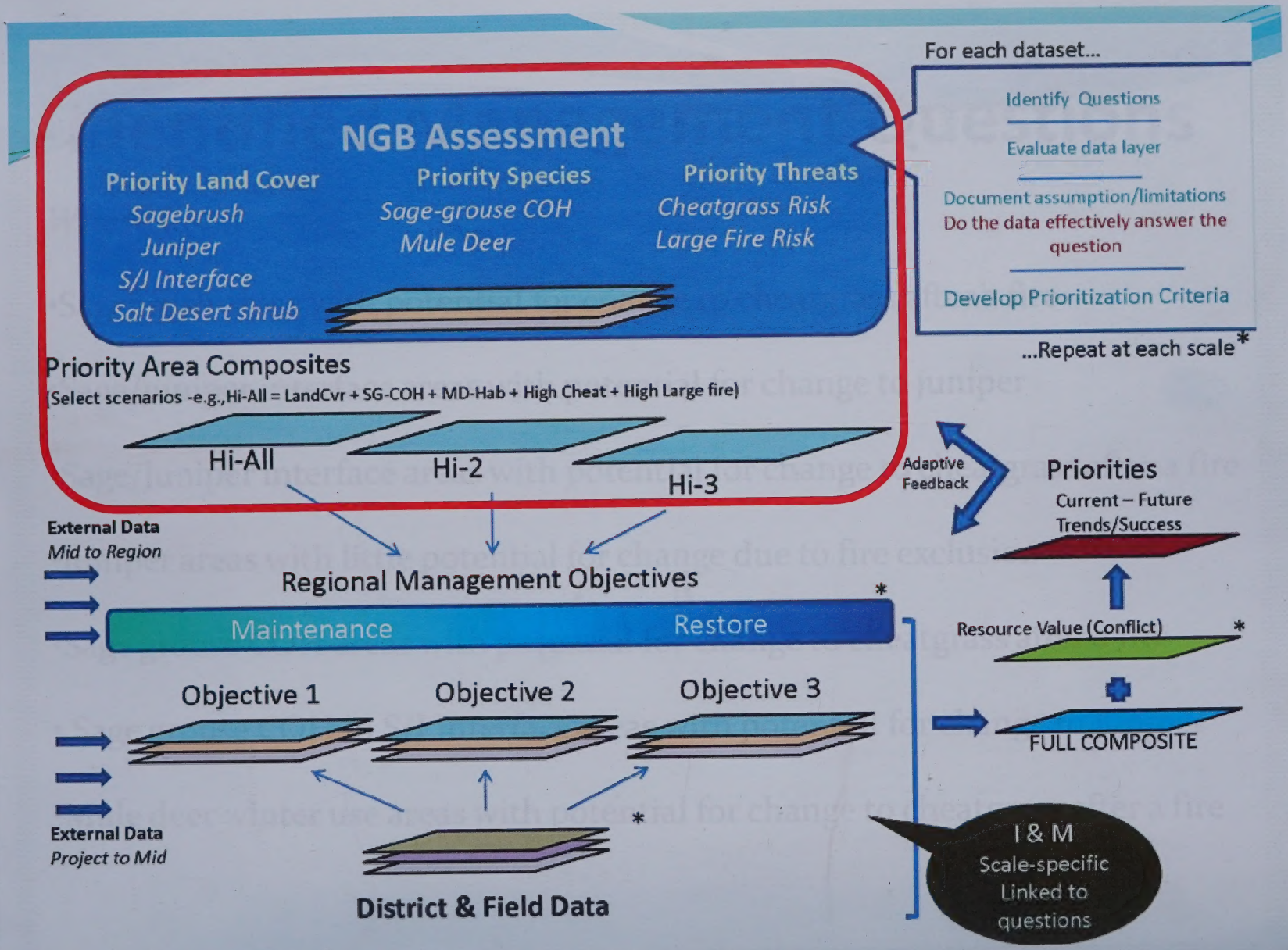
Agents of Change

Cheatgrass Invasion Risk



Large Fire Occurrence Risk



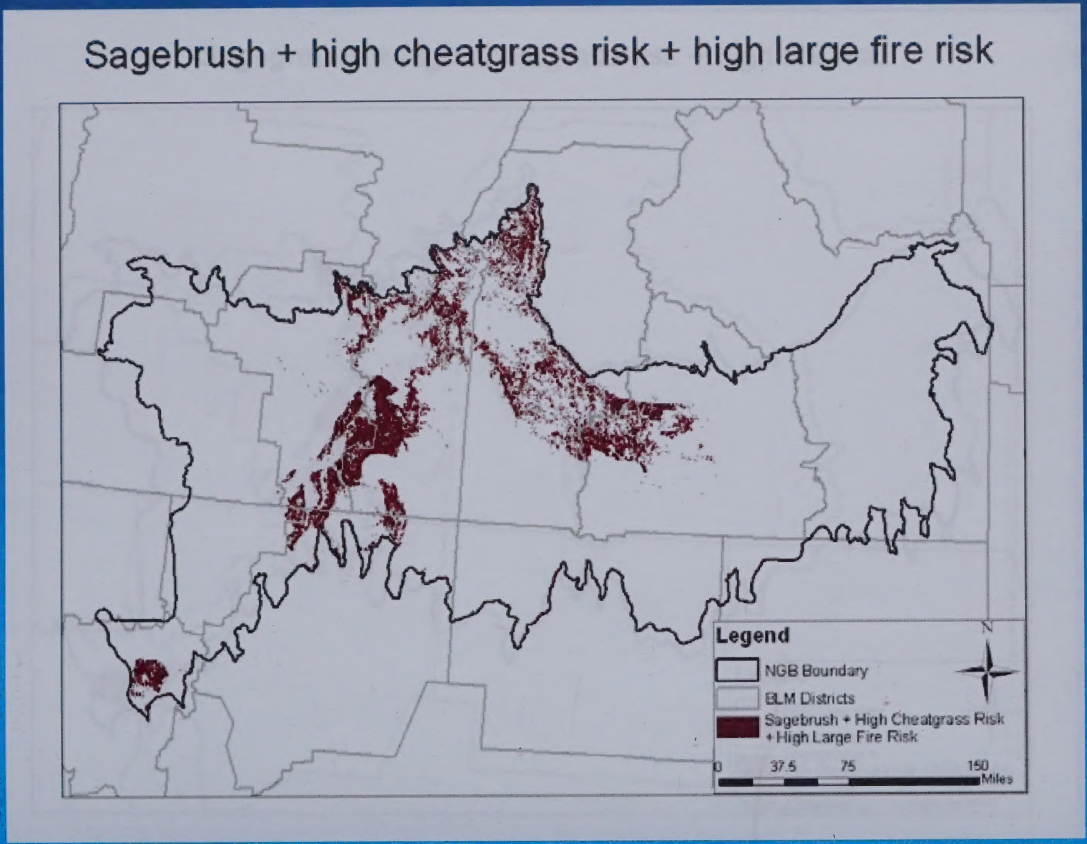

For each dataset...
Identify Questions
Evaluate data layer
Document assumption/limitations
Do the data effectively answer the question
Develop Prioritization Criteria
...Repeat at each scale*
NGB Assessment
Priority Land Cover
Sagebrush
Juniper
S/J Interface
Salt Desert shrub
Priority Species
Sage-grouse COH
Mule Deer
Priority Threats
Cheatgrass Risk
Large Fire Risk
Priority Area Composites
(Select scenarios -e.g., Hi-All = LandCvr + SG-COH + MD-Hab + High Cheat + High Large fire)
Hi-All
Hi-2
Hi-3
Adaptive Feedback
Priorities
Current – Future
Trends/Success
External Data
Mid to Region
Regional Management Objectives
*
Maintenance
Restore
Resource Value (Conflict)
*
Objective 1
Objective 2
Objective 3
FULL COMPOSITE
External Data
Project to Mid
*
District & Field Data
I & M
Scale-specific
Linked to questions

Identified Management Questions

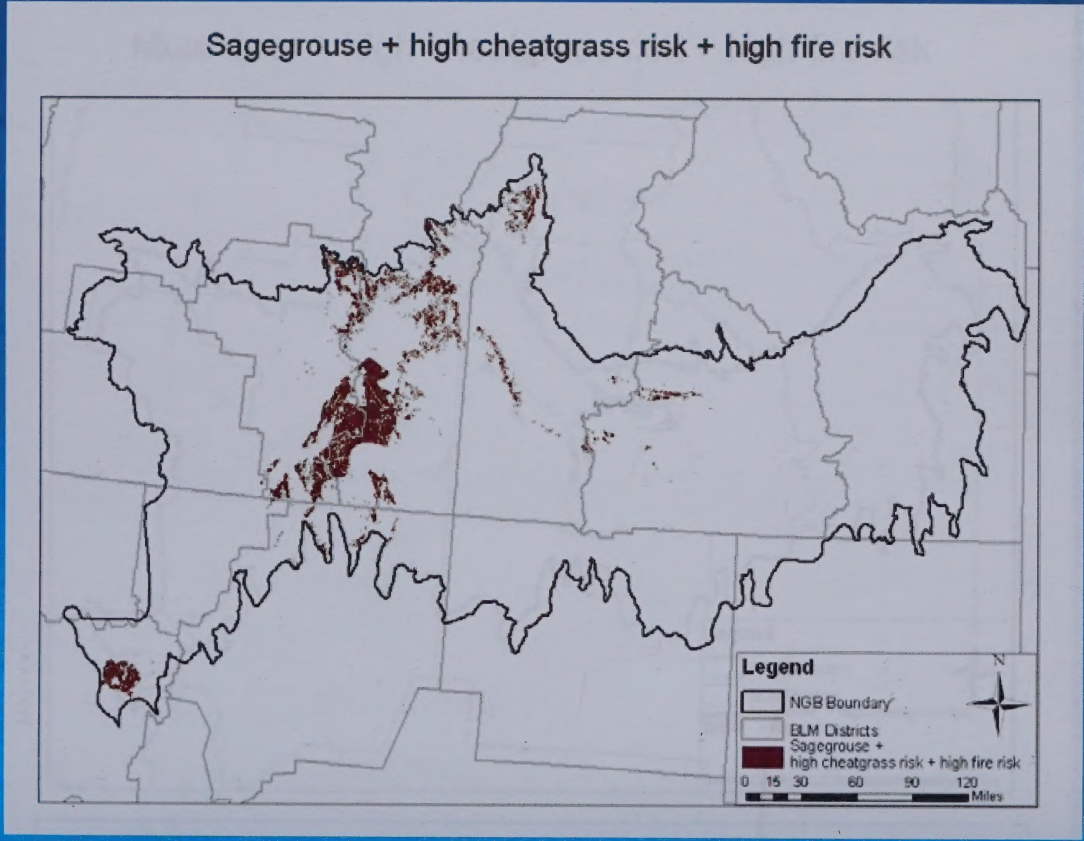
Where are…

- Sagebrush areas with potential for change to cheatgrass after a fire
- Sage/juniper interface areas with potential for change to juniper
- Sage/Juniper interface areas with potential for change to cheatgrass after a fire
- Juniper areas with little potential for change due to fire exclusion
- Sage grouse COH areas with potential for change to cheatgrass after a fire
- Sage grouse COH in S/J Interface areas with potential for change to Juniper
- Mule deer winter use areas with potential for change to cheatgrass after a fire

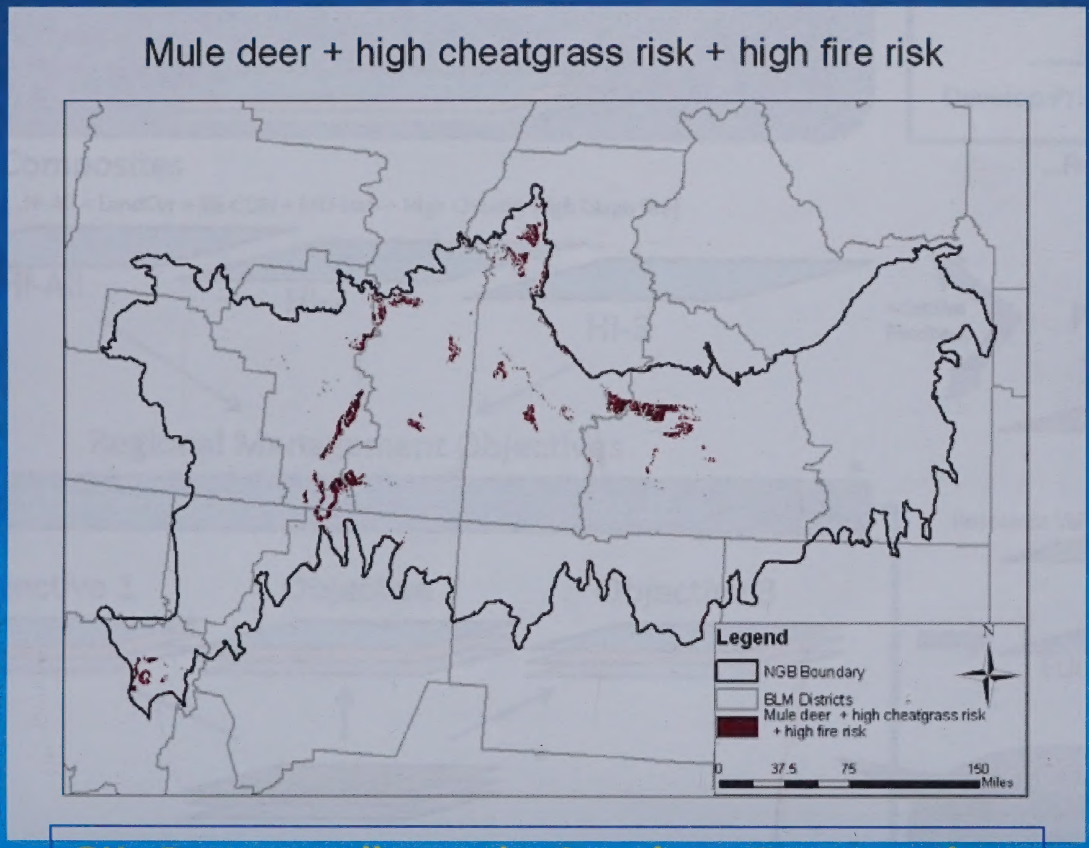
- Sagebrush areas with potential for change to cheatgrass after a fire



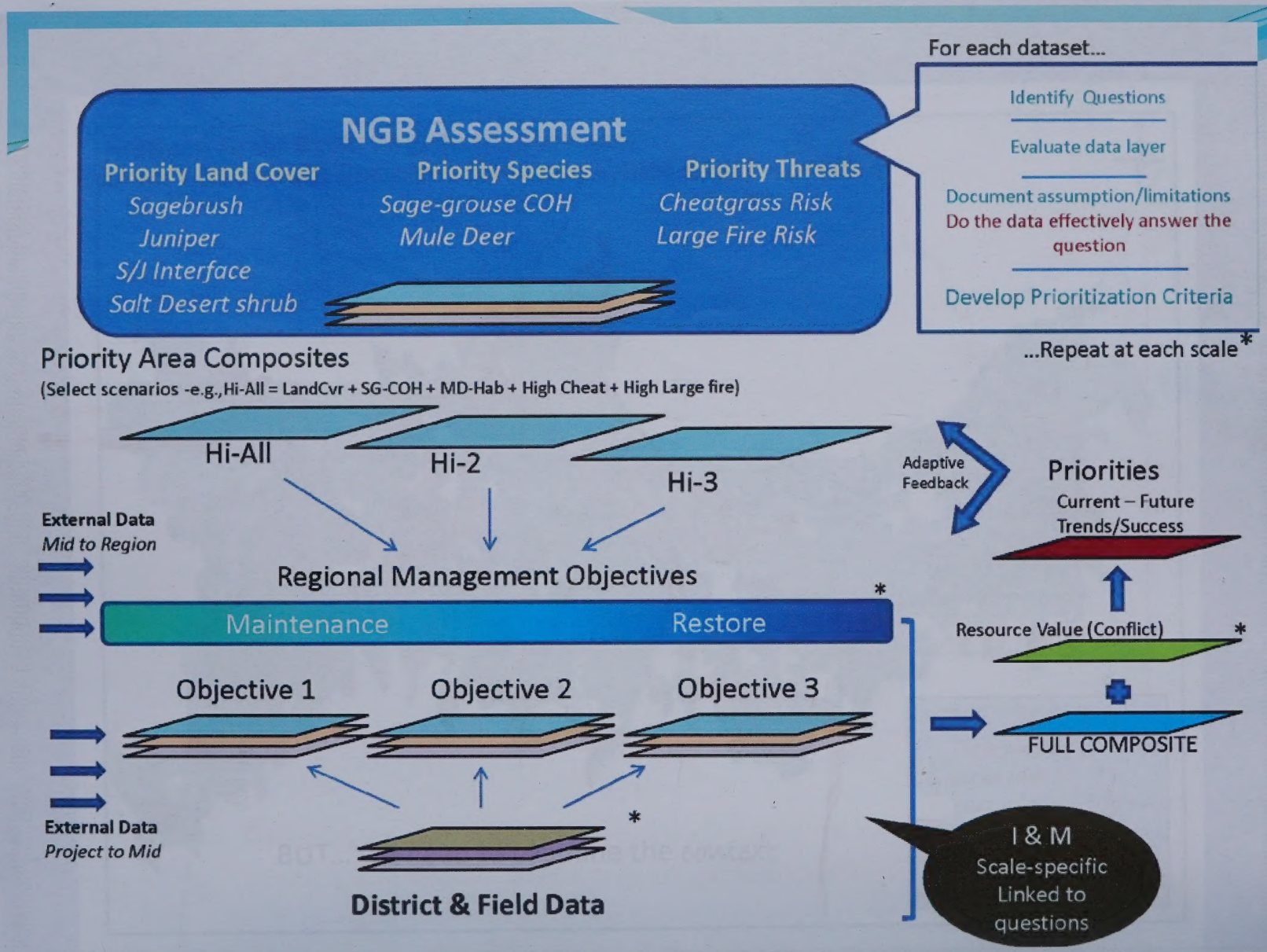
•Sage grouse COH areas with potential for change to cheatgrass after a fire



•Mule deer Winter use areas with potential for change to cheatgrass after a fire



OK…But we really need a *Stepdown Framework* to examine combined values + combined risk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Linked to
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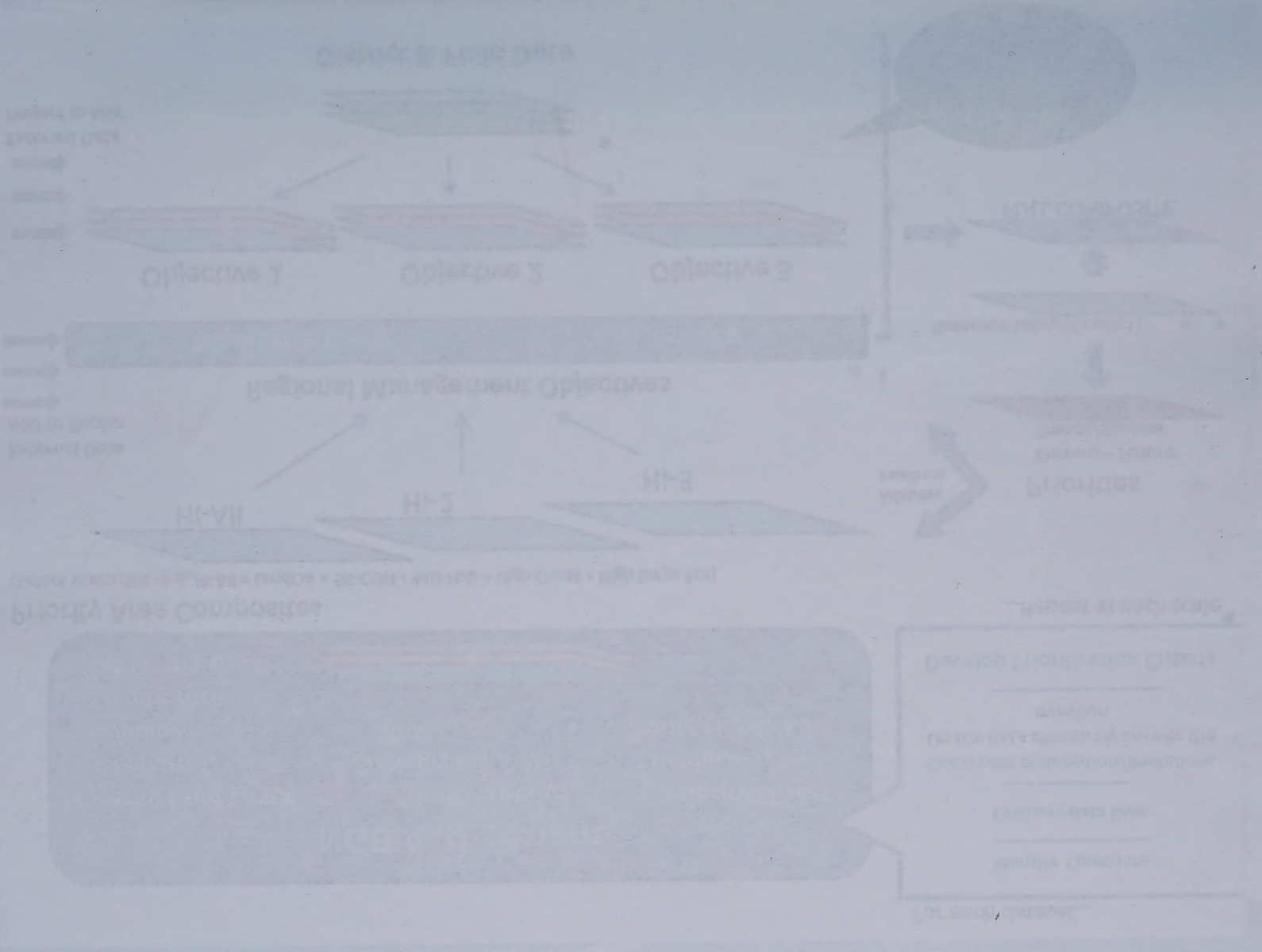
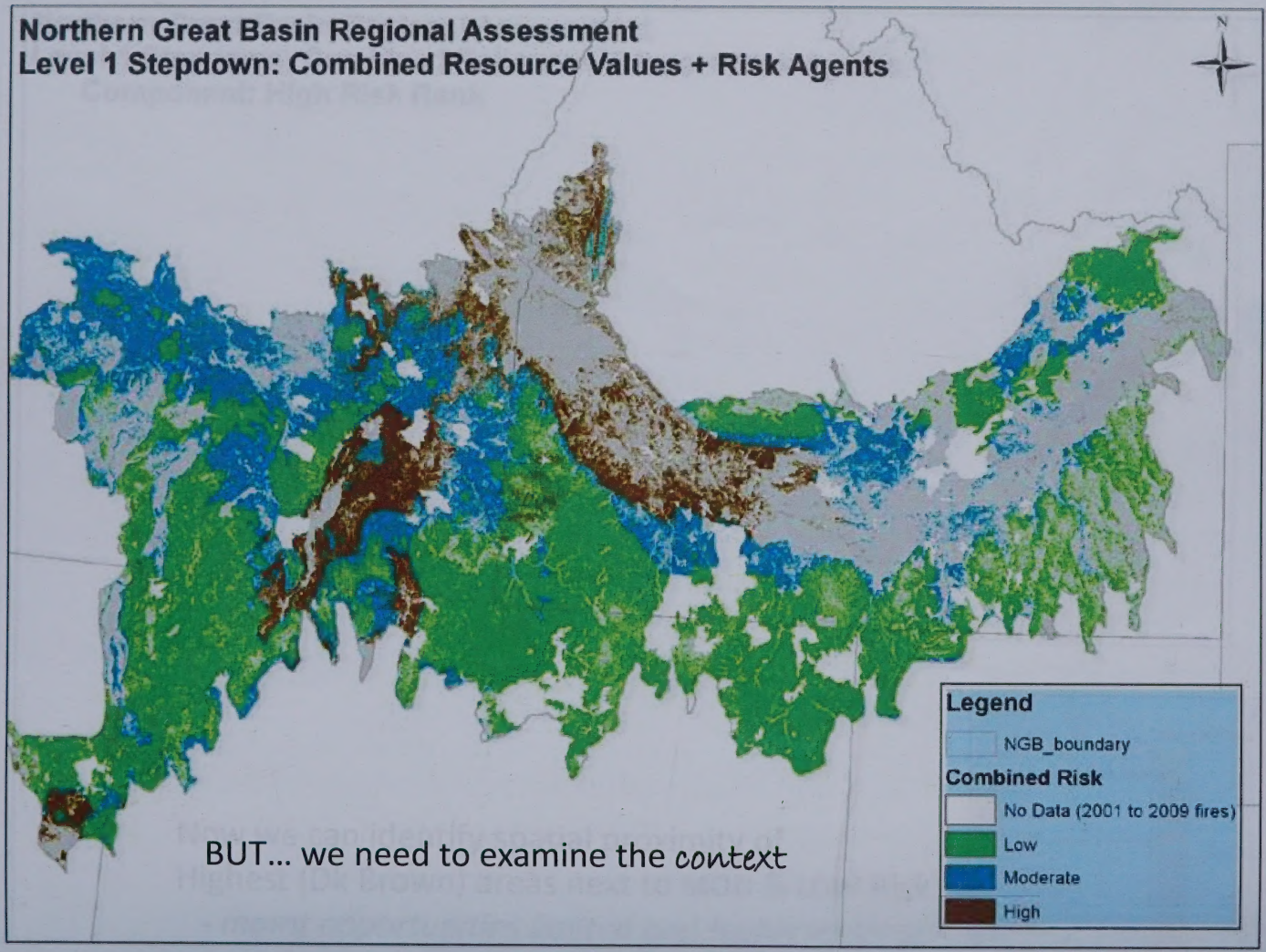
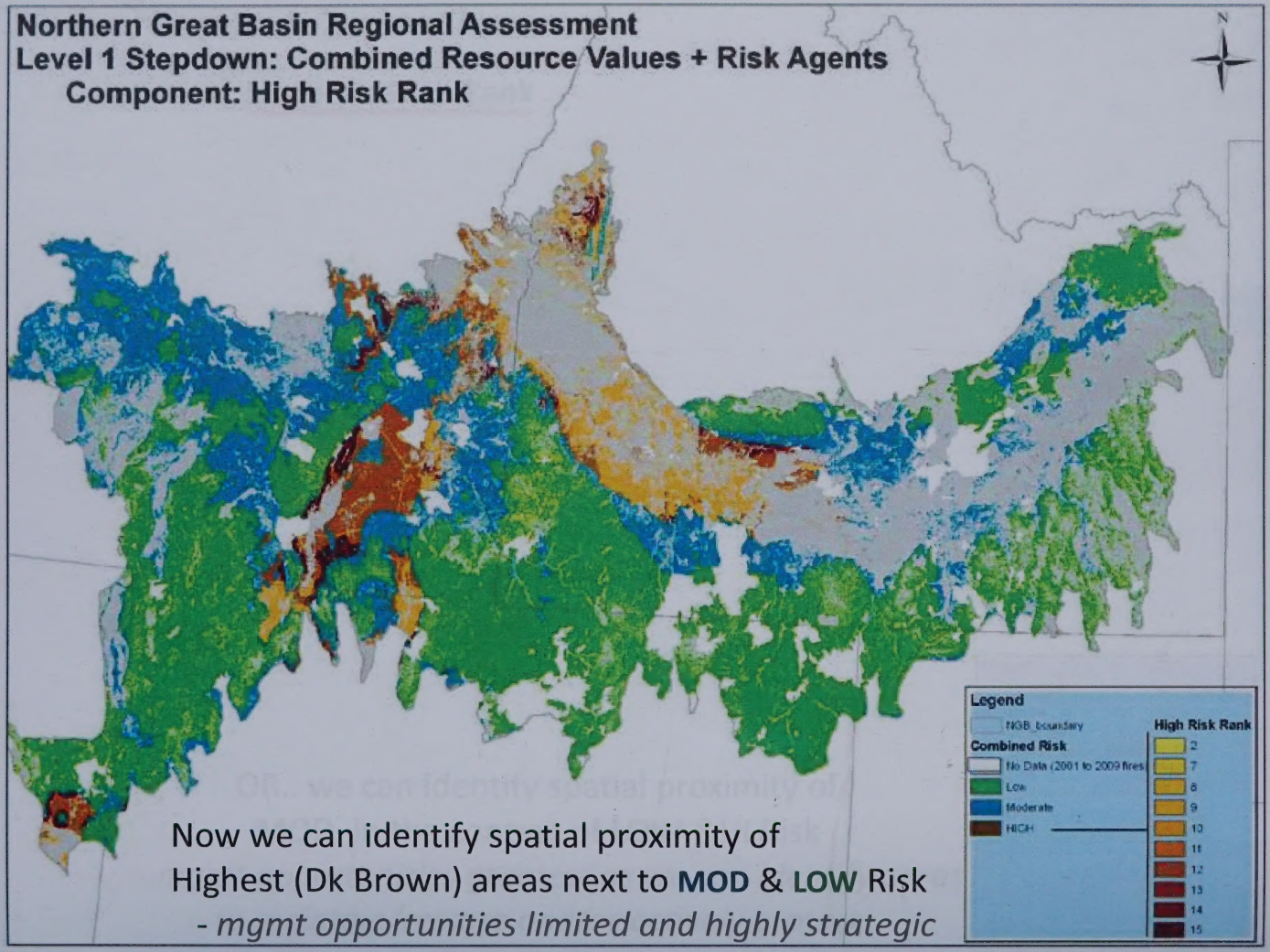
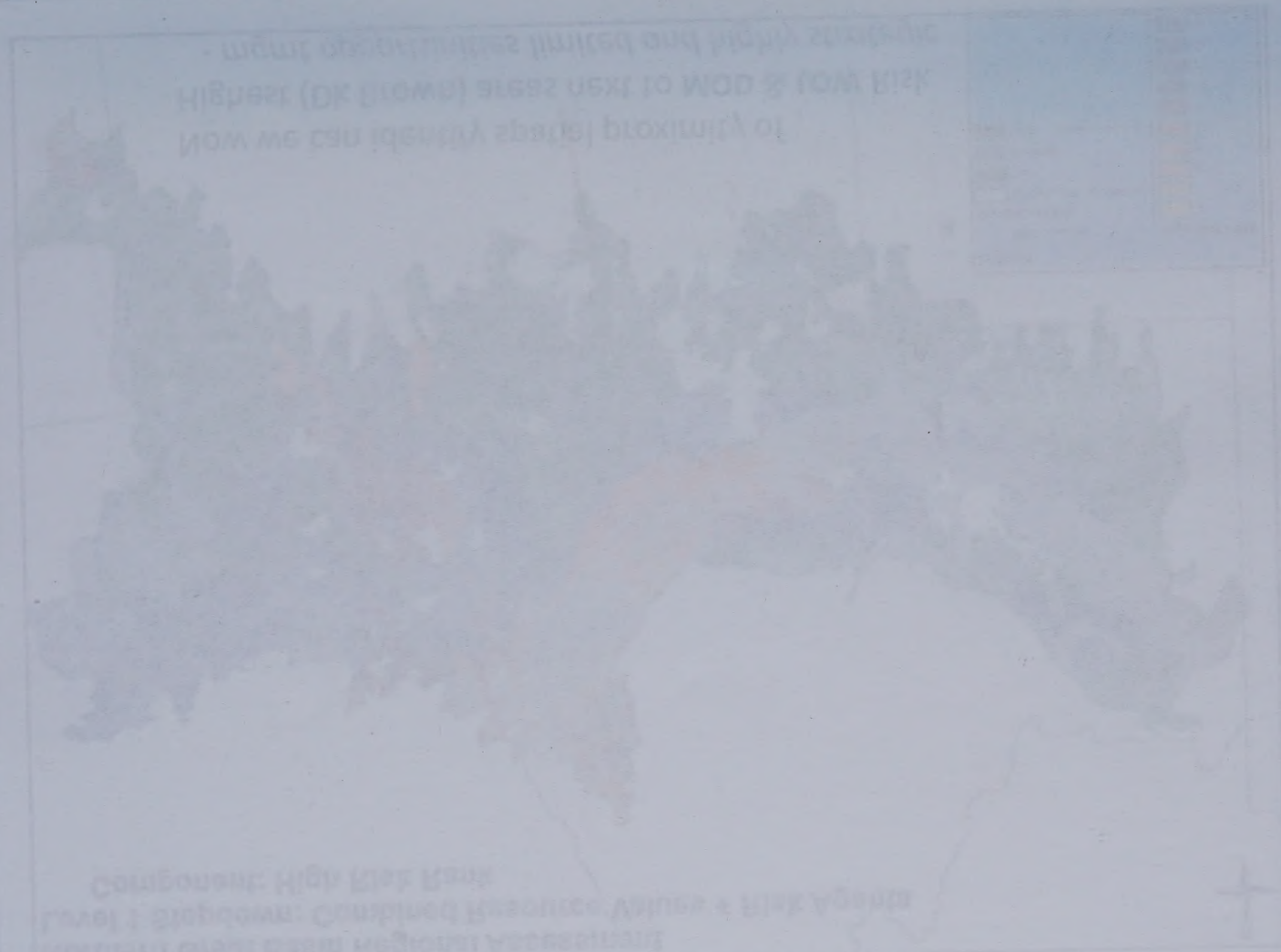
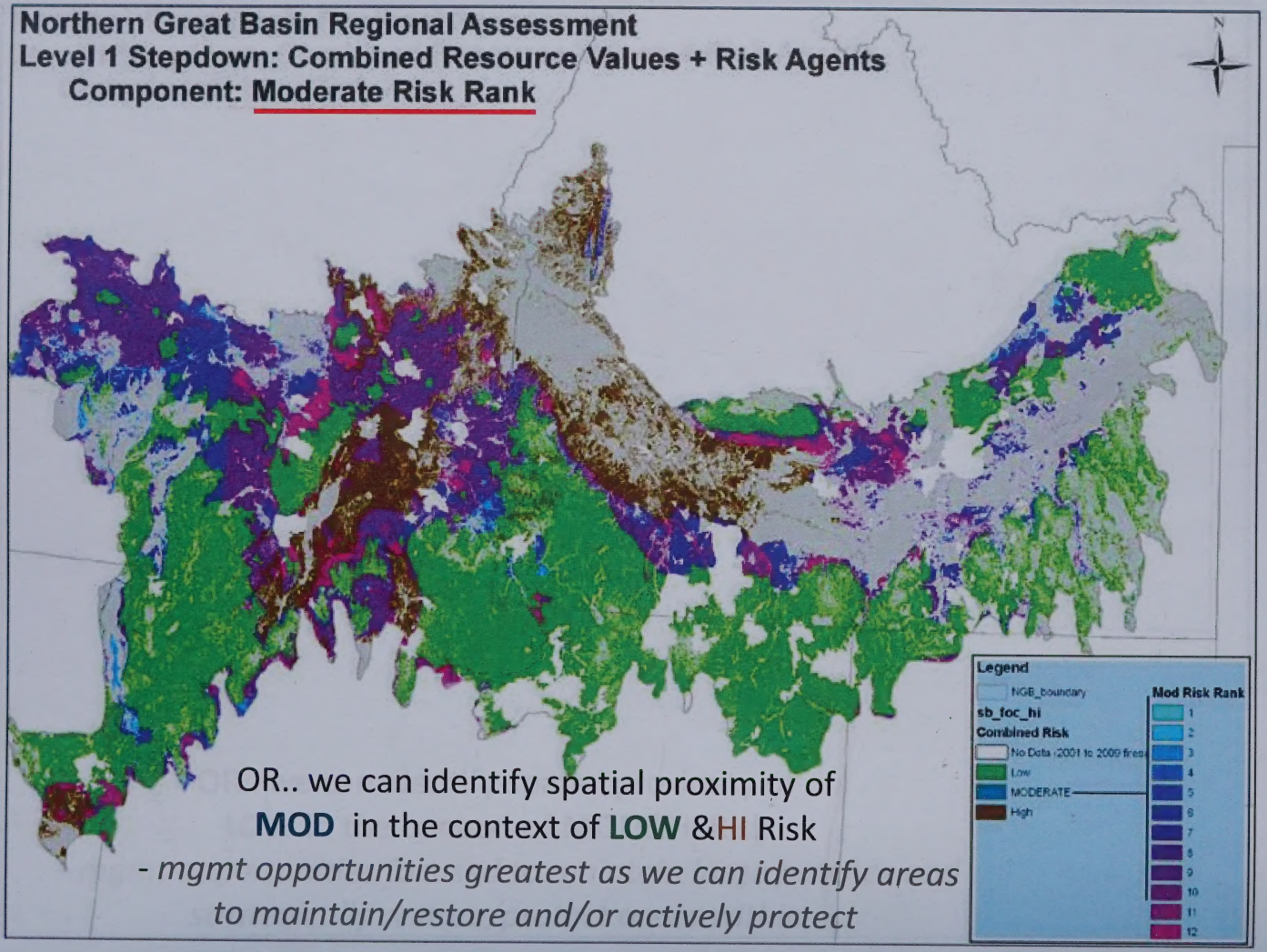
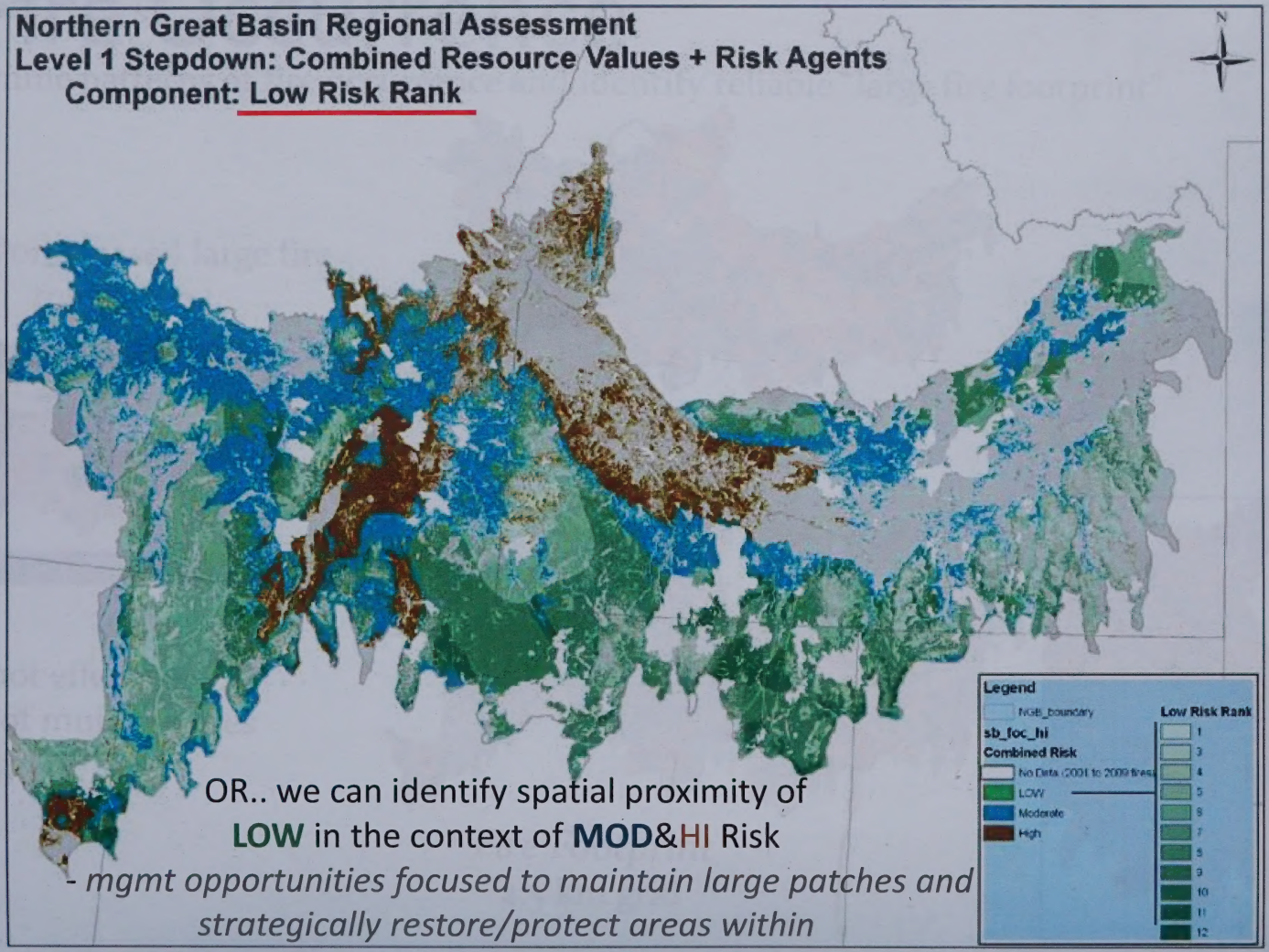



Northern Great Basin Regional Assessment
Level 1 Stepdown: Combined Resource Values + Risk Agents
N
Legend
NGB_boundary
Combined Risk
No Data (2001 to 2009 fires)
Low
Moderate
High
BUT… we need to examine the context


Northern Great Basin Regional Assessment
Level 1 Stepdown: Combined Resource Values + Risk Agents
Component: High Risk Rank
N
Legend
NGB boundary
Combined Risk
No Data (2001 to 2009 fires)
Low
Moderate
HIGH
High Risk Rank
2
7
8
9
10
11
12
13
14
15
Now we can identify spatial proximity of
Highest (Dk Brown) areas next to MOD & LOW Risk
- mgmt opportunities limited and highly strategic




Northern Great Basin Regional Assessment
Level 1 Stepdown: Combined Resource Values + Risk Agents
Component: Moderate Risk Rank
N
Legend
NGB_boundary
sb_foc_hi
Combined Risk
No Data (2001 to 2009 fires)
Low
MODERATE
High
Mod Risk Rank
1
2
3
4
5
6
7
8
9
10
11
12
OR.. we can identify spatial proximity of
MOD in the context of LOW &HI Risk
- mgmt opportunities greatest as we can identify areas
to maintain/restore and/or actively protect


Northern Great Basin Regional Assessment
Level 1 Stepdown: Combined Resource Values + Risk Agents
Component: Low Risk Rank
N
Legend
NGB_boundary
sb_foc_hi
Combined Risk
No Data (2001 to 2009 fires)
LOW
Moderate
High
Low Risk Rank
1
3
4
5
6
7
8
9
10
11
12
OR.. we can identify spatial proximity of
LOW in the context of MOD&HI Risk
- mgmt opportunities focused to maintain large patches and
strategically restore/protect areas within

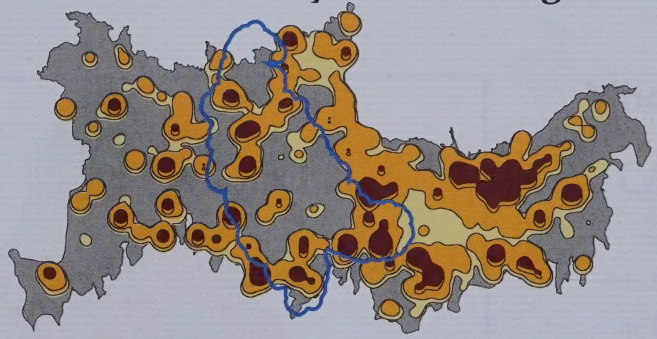
WORK IN PROGRESS

Fire Occurrence

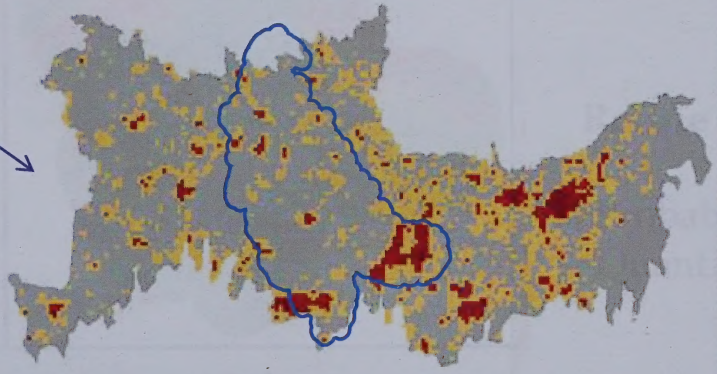
Examine patterns of fire occurrence and identify reliable "large fire footprint"

RA Point-based large fire too coarse...

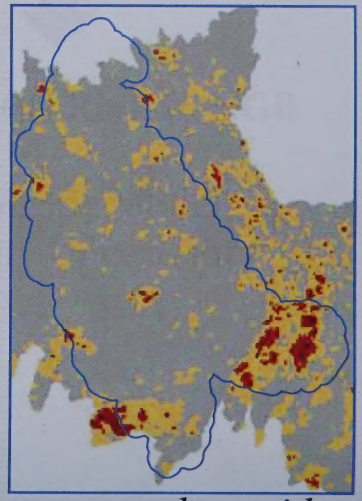
... not effective ID of multiple fires in space/time



Fixed Kernel Analysis



Fire Footprint
4.5 km grid

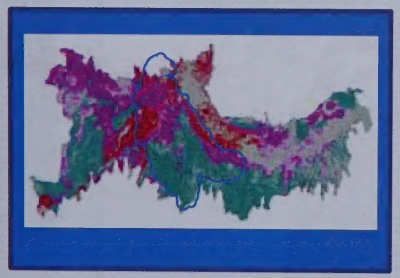


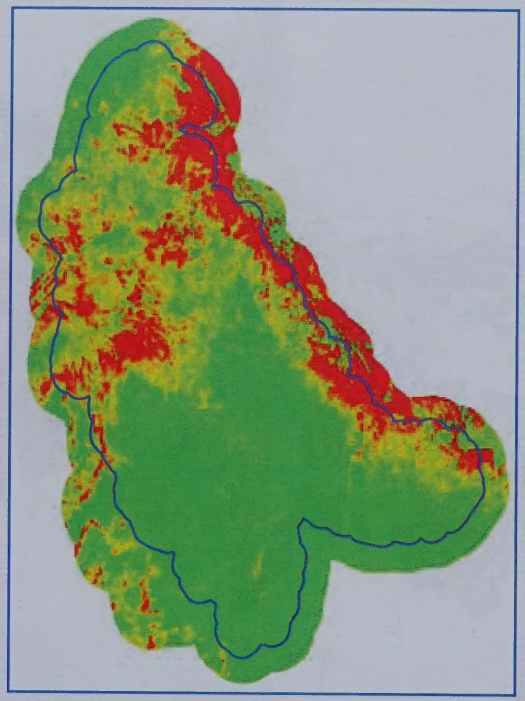
2 km grid

WORK IN PROGRESS

Cheatgrass Risk

RA – Wisdom Risk model can be improved...





2006 Annual Grass Cover Index
NVNHP – E. Peterson

Modify CG Risk in OU

CART Analysis (abiotic)

+ Ann Production
+ Climate

Refine CG Risk in NGB

Probabilistic Model
Quantify Uncertainty

WORK IN PROGRESS